

U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
73544 Hwy 64  
Meeker, CO 81641

## ENVIRONMENTAL ASSESSMENT

**NUMBER:** CO-110-2005-175-EA

**CASEFILE/PROJECT NUMBER** (optional): COC-61464

**PROJECT NAME:** APD for well # Federal 1-96-23-12

**LEGAL DESCRIPTION:** T.1S. R.96W. SWNW sec.23, 6<sup>th</sup> P.M

**APPLICANT:** XTO Energy Inc.

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

**Proposed Action:** The proposed action for well # Federal 1-96-23-12 is as follows: construct 0.15 mi. new access road, construct well pad, and upgrade approx. 4.9 mi. of existing two track road, and install buried steel pipeline parallel to access road to tie in point with existing pipeline.

Temporary access road width would be approximately 20' for drilling and if well is a producer, 50' for access road and pipeline ROW.

Native material used for construction of road and gravel purchased to improve road if well is a producer.

Roads would be crowned with bar ditches, and culverts installed if well is a producer.

On site production facilities would consist of one 210 bbl steel oil/condensate tank and two 400 bbl steel tanks for produced water.

The tanks would be surrounded by a berm constructed to contain 1½ times the volume of the largest tank.

All production facilities would be painted a flat, non reflective color as specified by BLM within 6 months of installation.

A 4" steel pipeline would be buried adjacent to the access road on the west side.

Water needed for drilling would be either trucked to the location or temporary surface lines would be laid.

Pad construction would be from native material on BLM or purchased from private landowners or gravel pits.

The reserve pit would be lined with a synthetic material, ~12 mils in thickness. The reserve pit shall be located in cut material, with at least 50% of the pit volume below original ground level. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. Once dry, the pit liner will be cut and removed at the mud line and the pit will be covered and buried in place.

Trash must be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than at completion of drilling operations.

Sewage from trailers and chemical portable toilets will be removed on a regular basis by a third party contractor and disposed of at an authorized sanitary waste facility.

Any and all chemicals used during the drilling and completion of the well will be kept to a minimum and stored within the boundaries of the well pad. The third party chemical contractor will be responsible for containment and clean-up and removal of all spilled chemicals on location.

Materials obtained from the construction of location, like topsoil and vegetation will be stockpiled as indicated and permitted by the approved APD. The stockpiles themselves may be outside the approved boundaries of the well pad.

The top 6" of topsoil material will be removed from the location and stockpiled separately as specified by the approved APD.

Topsoil along the access road will be reserved in place adjacent to the road as indicated by the approved APD.

Within 30-45 days after completion of well, all equipment that is not necessary for production shall be removed.

The reserve pit and that portion of the location not needed for production will be reclaimed in a given time period as specified by the BLM in the approved APD.

All road surfacing will be removed prior to the rehabilitation of roads, if necessary.

Reclaimed roads will have the berms and cuts reduced and will be closed to vehicle use.

All disturbed areas will be recontoured to replicate the natural slope.

The stockpiled topsoil will be evenly distributed over the disturbed area.

Prior to seeding, all disturbed areas, including the access roads will be scarified and left with a rough surface.

Seed will be drilled or broadcast immediately following construction/recontouring. If broadcast, the seeding rate will be doubled and a harrow or some other implement will be dragged over the seeded area to assure uniform seed coverage. The seed mixture will be specified by BLM.

If necessary an abandonment marker will be one of the following, as specified by BLM:

- 1) at least 4' above ground level, or
- 2) at restored ground level, or
- 3) below ground level.

In any case the marker shall be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either  $\frac{1}{4}$   $\frac{1}{4}$  or footages).

Total surface disturbance on BLM would be approximately 35 acres (4.8 ac. well pad, 30 ac. Pipeline & access road).

The date the work would start would be 09/24/05.

**No Action Alternative:** No permit would be approved, no well, access road, or pipeline would be constructed, and lessee would be denied lease rights. There would be no additional environmental consequences.

**ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:** None

**NEED FOR THE ACTION:** To respond to request by applicant to exercise lease rights and develop hydrocarbon reserves.

**PLAN CONFORMANCE REVIEW:** The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-5 thru 2-6

Decision Language: Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values.

**AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:**

**STANDARDS FOR PUBLIC LAND HEALTH:** In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a

finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

## **CRITICAL ELEMENTS**

### **AIR QUALITY**

*Affected Environment:* The proposed access roads and well pads are not located within a twenty five mile radius of any special designation air sheds or non-attainment areas. The Flattops Wilderness Area (Class 1 airshed) is located approximately 26.72 miles east of XTO Pad #1.

*Environmental Consequences of the Proposed Action:* During dry and windy periods, air quality may be compromised due to increased levels of fugitive dust originating from the exposed construction area and increased truck traffic on access roads. Overall, the proposed action by itself should not greatly compromise National Ambient Air Quality Standards (NAAQS) on an hourly or daily basis.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive dust, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. The application of a dust suppressant (e.g. water or “Dust Stop”) will be required during dry periods when dust plumes are visible at speeds less than or equal to 15 mph. Surfacing the roadway with gravels will also help mitigate fugitive dust production.

To reduce production of fugitive dust originating from stockpiled soils at the well pad (long term storage), these stockpiles will be covered with biodegradable fabrics such as (but not limited to) jute netting. In addition, stockpiled soils at the well pad will also be seeded with the appropriate seed mixture as outlined in the vegetation section of this document. Furthermore, soils stockpiled for short durations (e.g. during road construction/maintenance) will be wetted to reduce dust production.

### **CULTURAL RESOURCES**

*Affected Environment:* Well #1, the proposed XTO 1-96-23-12 well, and access has been inventoried at the Class III (100% pedestrian) level (Hays and Baer 2005, Compliance Dated 9/14/2005) with no cultural resources identified along the access road or on the well pad location.

*Environmental Consequences of the Proposed Action:* The proposed well pad and access road will not impact any known cultural resources.

*Environmental Consequences of the No Action Alternative:* There would be no new impacts to cultural resources under the No Action Alternative.

*Mitigation:* 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

## **INVASIVE, NON-NATIVE SPECIES**

*Affected Environment:* There are no known noxious weeds at the proposed drill site or access road. The invasive alien cheatgrass (*Bromus tectorum*) occurs throughout the project area, primarily on areas of unrevegetated earthen disturbance associated with roads pipelines and locations.

*Environmental Consequences of the Proposed Action:* The proposed action will create 26 acres of new earthen disturbance providing safe sites for the establishment of noxious weeds and cheatgrass.

*Environmental Consequences of the No Action Alternative:* There will be no change from the present situation.

*Mitigation:* The operator will be required to monitor the project site(s) for a minimum of three years post disturbance and to eradicate all noxious and invasive species which occur on site using materials and methods approved in advance by the Authorized Officer.

## **MIGRATORY BIRDS**

*Affected Environment:* There are a number of migratory birds that fulfill nesting functions in the big sagebrush, mixed shrub, and pinyon-juniper communities traversed by this project during the months of May, June, and July, including several species identified as having higher conservation interest by the Rocky Mountain Bird Observatory, Partners in Flight program (i.e., Virginia's warbler, Brewer's sparrow, gray flycatcher, black-throated gray warbler). Because the project area is composed largely of former sagebrush and mixed shrub communities that have become heavily encroached with pinyon-juniper regeneration and open-canopied submature forms (nearly 90%); neither sagebrush nor pinyon-juniper associates are well represented. Woodland species associated with cavities and mature stands (e.g., accipitrine hawks, juniper titmouse) are generally absent.

Although this high plateau area has no open water or wetland areas that support or attract waterfowl use, the development of reserve pits that contain drilling fluids have attracted waterfowl use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November).

*Environmental Consequences of the Proposed Action:* Construction and drilling associated with this project is scheduled to commence by late September 2005 and would likely be finalized by the year's end. It is likely that the pipeline would also be installed prior to mid-May and as such, this project would have no direct influence on breeding bird nesting activity during the 2006 breeding season.

The access route associated with the #1 well is a seldom-used 2-track that likely has no significant influence on breeding bird success or distribution. If the well is successful, road upgrading and pipeline installation would involve the clearing of a 50 foot right-of-way (about 30 acres). With regular and frequent vehicle travel on this route, it is likely that breeding bird densities would be reduced in close proximity to this corridor. Assuming notable use reductions within 100 feet of disturbance, it is likely that habitat capacity for nesting birds would be strongly reduced on about 160 acres (about 15 acres of Wyoming big sagebrush, 35 acres of basin big sagebrush, 100 acres of mixed shrub and regenerating or submature woodland). Based on local breeding bird information, this habitat base would be expected to support up to 75 nests, most of which would be more generalized species that are capable of exploiting transitional shrubland habitats (e.g., chipping sparrow, spotted and green-tailed towhees, blue-gray gnatcatcher), but would undoubtedly involve a number of higher interest species such as Virginia's and black-throated gray warbler.

It has recently been brought to BLM's attention that in certain situations migratory waterfowl have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent

and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

*Environmental Consequences of the No Action Alternative:* There would be no action authorized that would have potential to disrupt the breeding activities or habitats of migratory birds.

*Mitigation:* The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineer Technician immediately.

#### **THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)**

*Affected Environment:* There are not any listed, proposed, or candidate animals' species to the Endangered Species Act that are known to inhabit or derive important benefit from areas within the project site. Woodlands associated with this ridgeline are composed of regenerating or submature pinyon and juniper that have encroached on sagebrush and mixed shrub disclimax communities (fire-induced). These woodlands do not have sufficient structure to support roosting or nesting functions of BLM-sensitive bats (Townsend's big eared bat, Yuma and fringed myotis) or the northern goshawk.

The Magnolia area hosts a small, remnant population of greater sage grouse that are the target of population and habitat restoration efforts by the BLM and CDOW. The greater sage-grouse is considered a BLM-sensitive species and is the subject of considerable management emphasis on a local and national basis, including concerted habitat restoration activities by BLM and CDOW. Suitable habitat is generally confined to a relatively narrow 2- to 3-mile band of sage steppe habitats north of RBC 3 and south of a front of sagebrush habitats that, in an advanced successional status, support excessive woodland or serviceberry components. Recently relocated after being displaced from a site immediately adjacent to RBC 3, Magnolia's single sage-grouse strutting ground (up to 8 roosters in 2005) is located about 2500' north of the closest point on RBC 3 and about 3000 feet east of the 2-track trail proposed for well access. This insular population fulfills virtually all its life history requirements, including nesting, brood-rearing and wintering functions in this constricted band of habitat roughly between Greasewood Gulch and Dark Canyon. This habitat corridor has become increasingly isolated from potential habitats lying to the south and west by frequent traffic along RBC 3, heavy gas drilling activity along its southern rim, and a spate of gas processing and compressor facility installation on its

southwest corner. The habitat parcel itself is bisected by a series of ridgeline roads and a number of pipeline and powerline corridors.

*Environmental Consequences of the Proposed Action:* Well development would intersect between 2 to 3 miles of greater sage-grouse habitat that is used throughout the year by the small and insular Magnolia population. Project development is scheduled such that it would not intentionally coincide with the more sensitive period of reproduction, including nesting and brood-rearing, although it is likely that vehicle traffic will encounter birds through the fall and winter along the access road. The development of the access and pipeline corridor and attending traffic would introduce factors that increase the risk of direct mortality (e.g., vehicle collisions), predation (e.g., corridors cleared of effective hiding cover), or disruption of important seasonal reproductive functions (e.g., nesting attempts). Efforts to reestablish effective ground cover, reduce the risk of vehicle collisions, and confining disturbances to least critical timeframes (see mitigation below) would minimize mortality and the short and longer term deterioration of habitat utility. Effectively implemented, these actions would reduce impacts to the Magnolia sage-grouse population to discountable levels.

It is not considered necessary to limit access to the well-site through the strutting period, since activity would be confined to an existing county road that was in place prior to the time of lek establishment and the well access is no closer than 0.6 mile from the lek site.

*Environmental Consequences of the No Action Alternative:* There would be no action authorized that would have potential to adversely influence the Magnolia sage-grouse population or its associated habitat.

*Mitigation:* It is requested that the permanent combined right-of-way width be minimized to the extent practical from RBC 3 north 16,000 feet (3 miles) by using the access road as part of the pipeline working surface.

It is requested that the operator voluntarily agree to conditions whereby employees and any personnel associated with subcontractors refrain from possessing firearms or dogs on the job.

Traffic associated with well development, production, and maintenance activities would be limited to speeds of less than 35 miles per hour. Posting and enforcement of these speed limits or the installation of speed deterrents would be the responsibility of the operator.

Through the life of the well, subsequent well and pipeline maintenance activities that occur between April 15 and July 15 should strictly avoid the periods of 0.5 hour before sunrise to 2 hours after sunrise, and 1 hour before sunset to sunset. All vehicular access to the well and pipeline, including snowmobile and ATV use, shall remain on designated access roads.

In those areas that are composed predominantly of shrubs, woody debris cleared from the road and pipeline corridor should be redistributed uniformly across the pipeline corridor after final recontouring and seeding operations are complete.



Due to extent and distribution of habitat modification and anthropogenic features impinging on occupied sage-grouse habitats, development of the access, well, and pipeline (including well completion activities) would not be allowed between April 15 and July 7. This stipulation is consistent with the following White River ROD/RMP stipulation:

**TL-6 (WR-25) Sage Grouse Nesting Habitat.** This area encompasses suitable sage grouse nesting habitat associated with individual leks. This stipulation will not take effect until direct and indirect impacts to suitable nesting cover exceeds 10 percent of the habitat available within 2 miles of identified leks. Further development, after this threshold has been exceeded, will not be allowed from April 15 through July 7. (Development can occur until 10 percent of the habitat associated with a lek is impacted, from then on, additional activity can occur from July 8 through April 14)

**EXCEPTION:** The Area Manager may grant an exception if an environmental analysis and consultation with the CDOW indicates that the proposed action could be conditioned so as not to affect nest attendance, egg/chick survival, or nesting success. An exception could also be granted if the proponent, BLM, and CDOW negotiate compensation that would satisfactorily offset the anticipated losses of nesting habitat or nesting activities. Actions designed to enhance the long term utility or availability of suitable nest habitat may be excepted.

**MODIFICATION:** The Area Manager may modify the size of the TL area if an environmental analysis indicates that the proposed action could be conditioned so as not to affect nest attendance, egg/chick survival, or nesting success. Timeframes may be modified if operations could be conditioned to allow a minimum of 70 percent of nesting attempts to progress through hatch.

**WAIVER:** This stipulation may be waived if CDOW determines that the described lands are incapable of serving the long term requirements of sage grouse nesting habitat and that these ranges no longer warrant consideration as components of sage grouse nesting habitat.

*Finding on the Public Land Health Standard for Threatened & Endangered species:* The capacity of Magnolia's sage steppe habitats to provide long term support of this insular population of greater sage-grouse is currently at-risk due to a series of historic habitat quality issues (e.g., advanced seral succession, degraded channel systems), and more recently, a dramatic increase in natural gas development and installation of natural gas transmission facilities. Although habitat restoration activities, improved grazing management, and recent increases in moisture appear to have halted a declining population trend, the proposed well and access represents the first significant transgression of this population's habitat core and heralds an impending increase in activity that may jeopardize the existence of this population. As conditioned with the attached provisions, and only with the full cooperation and support of the applicant, the proposed project may be constructed and operated with only modest temporary impact to these birds, thereby allowing the project to proceed in a manner that does not aggravate conditions that pose a threat to the continued meeting of the land health standards for this special status species.

## **WASTES, HAZARDOUS OR SOLID**

*Affected Environment:* There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

*Environmental Consequences of the Proposed Action:* No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

*Environmental Consequences of the No Action Alternative:* No hazardous or other solid wastes would be generated under the no-action alternative.

*Mitigation:* None

## **WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)**

*Affected Environment:* Surface Water: XTO well pad #1, access road and pipeline are situated in stream segment 17 of the White River Basin. Well pad #1 and its access road run through the following watersheds: Dry Fork Piceance Creek, Corral Gulch, Dark Canyon, West Fork Dry Fork Piceance Creek.

A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list and the Unified Watershed Assessment was done to see if any water quality concerns have been identified. The State has classified stream segment 17 of the White River Basin as "Use Protected". The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply.

Stream segment 17 has been designated by the state as beneficial for the following uses: Cold Aquatic Live 2, Recreation 2, and Agriculture. Minimum standards for four parameters have been listed, these parameters are: dissolved oxygen = 6.0 mg/l, pH = 6.5 – 9.0, Fecal Coliform = 2000/100 ml, and 630/100 ml E. coli. Stream segment 17 retained its Recreation Class 2 designation after sufficient evidence was received that a Recreation Class 1a use was unattainable.

Ground Water: A review of the US Geological Survey Ground Water Atlas of the United States (HA 730-C) was done to assess ground water resources at the location of the proposed action. The shallowest aquifer underlying the proposed action is the Uinta-Animas aquifer. The Uinta-Animas aquifer at this location consists of the Uinta Formation and the Parachute Creek member of the Green River Formation. During the drilling process it is likely that deep ground water from the Fort Union Formation and Mesaverde Group also be encountered.

*Environmental Consequences of the Proposed Action:* Construction of a new access road will result in substantial losses of effective ground cover. Exposed soils will be vulnerable to erosional processes increasing sediment supply to the system. Heavy truck traffic will cause rutting to develop over portions of the roadway. Rut development will channelize surface water down the roadway accelerating erosion rates. Heavy truck traffic on the road way will also increase soil compaction resulting in erosive overland flows.

Improper design and placement of drainage relief structures will cause excessive erosion if failure results.

Water quality issues may also arise if leaks or spills involving environmentally unfriendly substances are allowed to penetrate local water tables or contact surface waters. Contaminants having potential to be in direct contact with surface water would be detrimental to water quality as well as the health of riparian communities and wildlife in the downstream reaches.

CSU-1 “fragile” soils will be vulnerable to erosion with a loss in ground cover and vegetation. In the absence of functional drainage structures, sediment loads will be elevated to down stream reaches adversely impacting stream hydrology and channel morphology.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so. Construction activities associated with the proposed actions require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP available for review by the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies (including springs and seeps) without BLM approval.

All road construction/upgrades and well pad construction must strictly adhere to “Gold Book” surface operating standards for oil and gas exploration and development. CMPs are not recommended on slopes less than 10% and will NOT be used as drainage relief structures for stream crossings/gullies or to drain inside drain ditches on slopes less than 3% unless approved by the BLM. Based on the nature of the affected soils, drain dips will be utilized in place of CMPs in these locations.

All activity must stop when soils or road surfaces become saturated to a depth of three inches. Mud blading will be prohibited in attempts to reduce further soil displacement. In addition, following abandonment of the well pad all disturbed surfaces will be recontoured to the original

grade, seeded with the appropriate seed mixture as outlined in the vegetation section of this document and, if necessary, promptly covered with a sufficient amount of woody debris.

To mitigate contamination of local ground water, environmentally unfriendly substances (e.g. diesel) must not be allowed to contact soils. The use of impermeable matting under equipment is suggested to intercept such contaminants prior to contacting soils. Furthermore, all pits must be lined and all wastes associated with construction and drilling will be properly treated and disposed of. Finally, aquifers beneficial for human consumption and livestock encountered during the drilling process must be properly sealed to reduce potential for contamination.

*Finding on the Public Land Health Standard for water quality:* Stream segments 16 and 17 of the White River Basin currently meets water quality standards set by the state. Following suggested mitigation measures, water quality in the affected stream segment will be unaffected by the proposed action.

#### **CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:**

No ACEC's, flood plains, prime and unique farmlands, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

#### **NON-CRITICAL ELEMENTS**

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

#### **SOILS** (includes a finding on Standard 1)

*Affected Environment:* The following data is a product of an order III soil survey conducted by the NRCS. The accompanying table highlights important soil characteristics. A complete summary of this information can be found at the White River Field Office.

CSU-1 "fragile soils" will be encountered on the access road to XTO pad #2 for the first ~0.5 miles above the first crossing. As stated in the White River RMP, surface disturbing activities on fragile soils with slopes greater than 35 percent will be allowed only after an engineered construction/reclamation plan is submitted by the operator and approved by the Area Manager.

Soil Number	Soil Name	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock
15	Castner channery loam	5-50%	Pinyon-Juniper woodlands	<2	Medium to rapid	Moderate to very high	10-20
42	Irigul channery loam	5-50%	Loamy Slopes	<2	Medium to rapid	Very high	10-20

Soil Number	Soil Name	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock
43	Irigul-Parachute complex	12-45%5-30%	Loamy Slopes/Mountain Loam	<2	Rapid	Slight to high	10-20
59	Parachute-Rhone loams	5-30%	Mountain Loam	<2	Medium	Moderate to high	20-40
73	Rentsac channery loam	5-50%	Pinyon-Juniper woodlands	<2	Rapid	Moderate to very high	10-20
76	Rhone loam	30-75%	Brushy Loam	<2	Medium	Very high	40-60
91	Torriorthents-Rock Outcrop complex	15-90%	Stoney Foothills		Rapid	Very high	10-20

*15-Castner channery loam* (5 to 50 percent slopes) is a shallow, well drained soil found on mountainsides, ridge tops, and uplands. The native vegetation is mainly pinyon and juniper and an understory of brush and grasses. Typically, the upper part of the surface layer is dark grayish brown channery loam about 7 inches thick. The lower part is dark grayish brown very channery loam about 4 inches thick. The underlying material is grayish brown, calcareous very channery loam about 6 inches thick. Sandstone is at a depth of 17 inches. Depth to sandstone ranges from 10 to 20 inches. Permeability of the Castner soil is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium to rapid, and the hazard of water erosion is moderate to very high.

*42-Irigul channery loam* (5 to 50 percent slopes) is a shallow, well drained soil located on ridges and mountainsides. It formed in residuum derived from sandstone and hard shale. The native vegetation is mainly grasses and shrubs. Typically, the surface layer is grayish brown channery loam 5 inches thick. The underlying material is brown extremely channery loam 7 inches thick. Hard sandstone is at a depth of 12 inches. Depth to hard sandstone or shale is 10 to 20 inches. Permeability of this Irigul soil is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium to rapid, and the hazard of water erosion is very high.

*43-Irigul-Parachute complex* (5 to 30 percent slopes) is located on ridges and mountainsides. The native vegetation is mainly grasses and shrubs. The Irigul soil is shallow and well drained. It formed in residuum derived from sandstone and hard shale. Typically, the surface layer is grayish brown channery loam 5 inches thick. The underlying material is brown extremely channery loam 7 inches thick. Hard sandstone is at a depth of 12 inches. Depth to hard sandstone or shale is 10 to 20 inches. Permeability of the Irigul soil is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium to rapid, and the hazard of water erosion is very high. The Parachute soil is moderately deep and well drained. It formed in residuum derived dominantly from sandstone. Typically, the surface layer is grayish brown loam 4 inches thick. The upper 20 inches of the subsoil is grayish brown loam channery loam, and the lower 8 inches is pale brown extremely channery sandy loam 6 inches thick. Sandstone is at a depth of 38 inches. Depth to sandstone or shale ranges from 20 to 40 inches. Permeability of the Parachute soil is moderate. Available water capacity is low. Effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is moderate to very high.

*59-Parachute-Rhone loams* (5 to 30 percent) is found on mountainsides and upland ridges. The native vegetation is mainly brush and grasses. The Parachute soil is moderately deep and well drained. It formed in residuum derived dominantly from sandstone. Typically, the surface layer is grayish brown loam 4 inches thick. The upper 10 inches of the subsoil is grayish brown loam, and the lower 10 inches is grayish brown channery loam. The next layer is pale brown very channery loam 8 inches thick. The substratum is very pale brown extremely channery sandy loam 9 inches thick. Fractured sandstone is at a depth of about 38 inches. Depth to sandstone ranges from 20 to 40 inches. Permeability of the Parachute soil is moderate. Available water capacity is low. Effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

The Rhone soil is deep and well drained. It formed in residuum and colluvium derived dominantly from sandstone. Typically, the upper part of the surface layer is dark grayish brown loam about 8 inches thick, the next 16 inches is dark grayish brown loam, and the lower part is grayish brown very channery loam 16 inches thick. The substratum is brown very channery loam 10 inches thick. Fractured sandstone is at a depth of about 50 inches. Depth to sandstone ranges from 40 to 60 inches. Permeability of the Rhone soil is moderate. Available water capacity is high. Effective rooting depth is 40 to 60 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

*73-Rentsac channery loam* (5 to 50 percent slopes) is a shallow, well drained soil located on ridges, foothills, and side slopes. It formed in residuum derived dominantly from calcareous sandstone. The native vegetation is mainly pinyon, juniper, brush, and grasses. Elevation is 6,000 to 7,600 feet. Typically, the surface layer is grayish brown channery loam about 5 inches thick. The next layer is very channery loam about 4 inches thick. The underlying material is extremely flaggy light loam 7 inches thick. Hard sandstone is at a depth of 16 inches. Permeability of this Rentsac soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is moderate to very high.

*76-Rhone loam* (30 to 75 percent slopes) is a deep, well drained soil found on mountainsides, upland ridges, and side slopes. It formed in residuum and colluvium derived dominantly from sandstone. The native vegetation is mainly brush and grasses. Typically, the upper part of the surface layer is dark grayish brown loam about 8 inches thick. The lower part is dark grayish brown loam about 16 inches thick. The next layer is grayish brown very channery loam 16 inches thick. The underlying material is brown very channery loam 10 inches thick. Fractured sandstone is at a depth of 50 inches. Depth to sandstone ranges from 40 to 60 inches. Permeability of the Rhone soil is moderate. Available water capacity is high. Effective rooting depth is 40 to 60 or more inches. Runoff is medium, and the hazard of water erosion is very high.

*91-Torriorthents-Rock outcrop complex* (15 to 90 percent slopes) is located on extremely rough and eroded areas on mountains, hills, ridges, and canyon sides. The native vegetation is mainly sparse shrubs and grasses with some pinyon and juniper trees. Torriorthents are very shallow to moderately deep and are well drained and somewhat excessively drained. No single profile of

Torriorthents is typical, but one commonly observed in the survey area has a surface layer of pale brown channery loam about 3 inches thick. The underlying material is very pale brown channery loam, very channery loam, or fine sandy loam about 13 inches thick. Shale or sandstone is at a depth of 16 inches. Torriorthents are calcareous throughout. Permeability of the Torriorthents is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is very rapid, and the hazard of water erosion is very high.

*Environmental Consequences of the Proposed Action:* Construction of access roads and well pads will reduce ground cover resulting in increased soil exposure to erosional processes. The use of heavy equipment will cause soil compaction which in turn will decrease infiltration and permeability rates resulting in increased potential for erosive overland flows.

Road construction through fragile soils en route to XTO pad #2 will destabilize slopes in the affected areas increasing potential for sloughing on the cut slope. In addition, improper drainage relief structures will lead to accelerated erosion rates.

Leaks or spills of environmentally unfriendly substances may contaminate soils hindering revegetation efforts. Soils unable to support a healthy plant community will be less cohesive (due to lack of root structure) and more vulnerable to erosional processes.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* All road and well pad construction must strictly adhere to “Gold Book” surface operating standards for oil and gas exploration and development. At locations fragile soils are encountered along the access way, an engineered construction/reclamation plan must be submitted and approved by the Area Manager before any construction will be permitted. Native Seed mix #3 will be used in combination with silt fences and geo-textile fabric on fill slopes to enhance stabilization. All activity must stop when soils or road surfaces become saturated to a depth of three inches. No mud blading of roads will be permitted.

Stockpiled soils located on slopes greater than 5% will be required to have silt fences positioned on down gradient sides. This action will minimize sedimentation away from of stockpiles.

Complete reclamation will follow abandonment of well pads. Access roads and well pads will be recontoured, covered with woody debris, and 100% of disturbed surfaces will be revegetated with Native Seed Mix #3.

*Finding on the Public Land Health Standard for upland soils:* Soils within the project area meet the criteria established in the standard for upland soils. Following suggested mitigation, soil health will not be adversely impacted by the proposed actions.

## **VEGETATION (includes a finding on Standard 3)**

*Affected Environment:* Access to well #1 starts off RBC Rd 3 and is in mixed Mountain big sagebrush/serviceberry with a diverse understory of native grasses and forbs. About 2 miles

off the ridge road (RBC Rd 3, ) the dominant vegetation changes to a Pinyon woodland with a mixed mountain browse understory and then to a mature pinyon juniper woodland where the well is located.

*Environmental Consequences of the Proposed Action:* The principal impact to vegetation will be complete removal of vegetation on 26 acres of the well sites and access roads and the earthen disturbance associated with it. In terms of plant community composition, structure and function, the principal negative impact over the long term would occur if invasive species or noxious weeds are allowed to establish and proliferate on the disturbed areas resulting from pad and access road construction.

*Environmental Consequences of the No Action Alternative:* There will be no change from the present situation.

*Mitigation:* Promptly recontour and revegetate all disturbed areas not necessary for production *including road and pad cut and fill slopes* with Native Seed mix #3. Revegetation will commence immediately after construction and will not be delayed until the following fall. Debris will not be scattered on the pipeline until after seeding operations are completed. Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application.

Native Seed Mix #3		
Western wheatgrass (Rosanna)	2	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)
Bluebunch wheatgrass ( Whitmar)	2	
Needle and thread	1	
Indian ricegrass (Rimrock)	2	
Fourwing saltbush (Wytana)	1	
Utah sweetvetch	1	

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Plant communities in the project area currently meet the Standard and would be expected to continue to meet the Standard over the short term if this project is implemented.

## **WILDLIFE, AQUATIC** (includes a finding on Standard 3)

*Affected Environment:* This pad is separated from the nearest perennial reach (Dry Fork of Piceance) by a minimum 1.5 miles. The Dry Fork supports sporadic flow and a simple invertebrate community. Piceance Creek, a perennial stream that is heavily influenced by seasonal irrigation drawdown, is the nearest system that supports a vertebrate community (e.g., small discontinuous populations of leopard frog, speckled dace, and flannel-mouthed sucker). Piceance Creek is separated from the proposed action by 7-8 miles with the nearest BLM-administered reach about 2 miles downstream of this point.

*Environmental Consequences of the Proposed Action:* This project is situated on a gentle-gradient ridge separated from the nearest aquatic system by 1.5 miles of overland flow and ephemeral channel. Pad and road construction would have no direct impact on aquatic



habitats. With the application of BMPs associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Dry Fork or Piceance Creek channels or their associated aquatic values.

*Environmental Consequences of the No Action Alternative:* There would be no action authorized that would have any direct or indirect influence on downstream aquatic habitat.

*Mitigation:* None.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Terrestrial): The Public Land Health Standards are not applicable to downstream reaches that support prolonged intermittent or perennial flows since they are substantially private or State-owned. The nearest BLM-administered reach is greater than 10 miles downstream. Neither the proposed or no-action alternative would have any reasonable potential to influence the function or condition of subtending channels or their aquatic habitat values.

## **WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

*Affected Environment:* The upper and middle elevation slopes of Magnolia are used extensively by deer and elk from September through December and again in April and May. Although the project area is used primarily during seasonal migration and the early winter months, smaller numbers of deer and elk summer across the project area in mesic draws. Non-game wildlife using this area are typical and widely distributed in extensive like habitats across the Resource Area and northwest Colorado; there are no narrowly endemic or highly specialized species known to inhabit those lands potentially influenced by this action. Suitable woodland habitat within 500 feet of surface disturbance was inspected for raptor nest activity by wildlife consultants in July 2005. No evidence of past or current nesting use was detected.

*Environmental Consequences of the Proposed Action:* The proposed action represents a substantial expansion of natural gas development activity to the north and east of Magnolia. Access to the #1 well uses an existing 2-track route and would, therefore, not add substantively to road density in this area, but the change in road character and increasing frequency of use would expand the extent of avoidance-related effects (i.e., behavioral avoidance and habitat disuse; increased energetic demands) to 200 acres or so.

Localized road density is currently about 2.6 miles per square mile, which is within the desired road density objective (3 miles per square mile) established for big game winter ranges in the White River RMP. Because of the existing road network in this area, it is not feasible to mitigate the adverse effects of roads on big game habitat utility through gating.

The long-term occupation of about 15-20 acres of foraging area (pad and road) and, later, reduction in woody overstory on about 15 acres for the pipeline would have negligible influence on big game forage availability, with the herbaceous component ultimately offset by reclamation.

Similar to the discussion above, road upgrading and pad construction would incrementally reduce the current extent and utility of associated nongame bird and mammal habitats. However, woodland habitats comprised primarily of regeneration and submature forms do not support a strong contingent of obligate woodland species due to suboptimal substrate (e.g., declining understory, relatively simple canopy structure, lack of cavities). The longer term loss of up to 15 acres of woodland encroachment and submature woodland habitats (the site likely an historic big sagebrush disclimax), 6 acres of basin big sagebrush, and 3 acres of the mountain browse type is considered minor. Similarly, the involvement of sagebrush steppe would be limited to about 4 acres with 1-2 acres subsequently rehabilitated.

Construction and drilling activities associated with this well would occur outside raptor nesting timeframes and would have little, if any potential influence on nest attempts that may occur in adjacent habitats.

*Environmental Consequences of the No Action Alternative:* There would be no action authorized that would have potential to affect resident wildlife populations or associated habitat.

*Mitigation:* The use of interim reclamation techniques will be used to the extent practicable on the pad such that: 1) all available topsoil material would be used to rehabilitate recontoured cut and fill slopes and areas outside the anchors (maintaining the viability of the soils for final reclamation), 2) production facilities are located to maximize the extent of surface disturbance available for recontouring and reclamation after completion operations and through the productive life of the well (e.g., where access road enters pad), and 3) all disturbed areas are reseeded and, if necessary, effectively fenced to control livestock use once well completion activities have been finalized (this includes cut and fill slopes of roads and trial application on the roadbeds themselves).

In the event newly constructed access roads on BLM surface are no longer needed for well maintenance or development the roads will be recontoured to original grade.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Aquatic): On a landscape scale, the project area meets the public land health standards for terrestrial animal communities. The proposed action is considered an incremental addition to those lands dedicated to mineral development, but would not detract appreciably from continued meeting of the land health standard at the landscape scale.

**OTHER NON-CRITICAL ELEMENTS:** For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management			X

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Forest Management	X		
Geology and Minerals			X
Hydrology/Water Rights		X	
Law Enforcement		X	
Noise	X		
Paleontology			X
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

## ACCESS AND TRANSPORTATION

*Affected Environment:* The proposed access for APD #1 (T.1S. R.96W. SWNW sec.23) is BLM road 1082. The proposed action occurs in an area where cross country motorized travel is limited to existing routes for the period of October 1 through April 30 of each year. Cross-country motorized travel is permitted the remainder of the year.

*Environmental Consequences of the Proposed Action:* BLM road will be improved to allow for oil and gas exploration equipment and will be maintained to a BLM level three maintenance standard.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* None.

## FIRE MANAGEMENT

*Affected Environment:* : The XTO #1 well proposed involves approximately 0.15 miles of road construction and about 4.9 miles of buried pipeline along an existing road. The clearing for this project will involve approximately 26 acres of disturbance in the PJ fuel type. Due to the existing tree cover of pinion and juniper, there will be a need for the operator to clear some of these trees. If not adequately treated, these trees will result in elevated hazardous fuels conditions and remain on-site for many years. These accumulations of dead material are very receptive to fire brands and spotting from wind driven fires and can greatly accelerate the rate of spread of the fire front. The road(s) associated with this project may be used by the general public for a variety of uses, including access for fire wood gathering, hunting and other dispersed recreational activities. Increased public use of an area will nearly always result in an increased potential for man-caused wildland fires.

The National Fire Plan calls for “firefighter and public safety” to be the highest priority for all fire management activities. In the pinion, juniper, and brush types common on the White River Resource Area, roads and other man-made openings are commonly used as fuel breaks or barriers to control the spread of both wildland and prescribed fires. By reducing the activity fuels created from this proposal, future fire management efforts in this area should be safer for those involved and more effective.

*Environmental Consequences of the Proposed Action:* There will be up to 26 acres of road, well pad and pipeline construction requiring the removal of pinion/juniper fuel type on the XTO #1 well site and pipeline construction. If not treated the slash and woody debris will create an elevated hazardous dead fuel loading which could pose significant control problems in the event of a wildfire. Additionally there would be greater threat to public, XTO Energy/contracted personnel, and fire suppression personnel.

*Environmental Consequences of the No Action Alternative:* There would be no tree removal or disturbance which would cause significant abnormal dead fuel loading.

*Mitigation:* Several options may be considered for treatment of slash from this project. A hydro-ax or other mulching type machine could be used to remove the trees. The machines are capable of shredding trees up to 12" in diameter and 15' tall as well as mowing brush like a conventional brush beater. It generally leaves small branches and pieces of wood from pencil size up to bowling ball size. The mulch is evenly scattered across the surface and the tires or tracks distribute the weight of the equipment. This would effectively breakdown the woody fuel and scatter the debris thereby eliminating any hazardous fuel load adjacent to the new road and well pad.

The other option would be to cut trees and have them removed for firewood, posts, or other products in accordance with forest management and RMP guidelines. The branches and tops should be lopped and scattered to a depth of 24 inches or less. If the products are left for collection by the general public, they should be piled along the road side or pad to facilitate removal.

## **GEOLOGY AND MINERALS**

*Affected Environment:* The surface geologic formation of the well location is Uinta and XTO’s targeted zone is in the Mesaverde. During drilling potential water, oil shale, and gas zones will be encountered from surface to the targeted zone. Aquifers that will be encountered during drilling are the Perched in the Uinta, the A-groove, B-groove and the Dissolution Surface in the Green River formation. These aquifer zones along with the Wasatch formation are known for difficulties in drilling and cementing. The well is located on Federal oil and Gas Lease COC-061464.

*Environmental Consequences of the Proposed Action:* The cementing procedure of the proposed action isolates the formations and will prevent the migration of gas, water, and oil

between formations. This includes oil shale and coal zones. However, conventional recovery of the coals is not considered feasible at the depths that are encountered in the well. Development of this well will deplete the natural gas resources in the targeted formation

*Environmental Consequences of the No Action Alternative:* The natural gas resources in the targeted zone would not be recovered at this time.

*Mitigation:* None

## PALEONTOLOGY

*Affected Environment:* The proposed well location for the XTO 1-96-23-12 well location is in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM has classified as a Condition I formation meaning it is known to produce Scientifically important fossil resources.

*Environmental Consequences of the Proposed Action:* Any time it becomes necessary to excavate into the underlying rock formation to build the road, level the well pad or excavate the reserve/blooiie pit there is the potential to impact scientifically important fossil resources.

*Environmental Consequences of the No Action Alternative:* There would be no new impacts to fossil resources under the No Action Alternative.

*Mitigation:* 1. All exposed outcrops of the formation must be inventoried by an approved paleontologist with a report submitted to the BLM detailing the results of the inventory and including any recommended mitigation measures before the initiation of construction.

2. A monitor shall be required to be on scene before any excavation into any rock is excavated to build the road, leveling of the well pad or excavation of the reserve/blooiie pit.

3. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines

for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

## **RANGELAND MANAGEMENT**

*Affected Environment:* Well #1 and access are located in the Little Hills allotment (06006) summer use area. This part of the Little Hills allotment is used by Lex and Jan Burke (100 Cows 6/1- 10/30) and Burke Brothers (300Y, 50 C 5/1- 10/30).

*Environmental Consequences of the Proposed Action:* The proposed action will create about 26 acres of new disturbance. This will result in a short term forage loss of 4 AUMs.

The proposed action could also interfere with proper functioning of the range improvements near the proposal. The fences and water sources in this area are necessary for control of cattle to achieve grazing objectives on two grazing allotments and to keep cattle from straying into the wrong grazing use area. Damage to fences or gates left open interfere with control of cattle and ultimately with proper utilization of the rangeland resource. Damage to watering facilities could affect water availability and distribution of livestock, resulting in increased grazing pressure on areas that have water available for livestock. Exploration and production activities, including heavy truck traffic, dusty roads etc. could have a significant negative impact on the affected livestock operations.

*Environmental Consequences of the No Action Alternative:* There will be no change from the present situation.

*Mitigation:* The access road for well #1 as presently configured is located so that it will destroy the Corral Well pipeline. The access road will have to be relocated so that it is no closer than 25 feet from this waterline so that the functionality of this waterline will be maintained.

The Field Manager may direct the operator to water roads or provide for dust abatement at any time he believes it is necessary.

## **REALTY AUTHORIZATIONS**

*Affected Environment:* The access and pipeline route for the Federal 1-96-23-12 well are across public lands and will require rights-of-way.

*Environmental Consequences of the Proposed Action:* The proposed action will require rights-of-way for the access (COC69027) and pipeline (COC60028) route for the Federal 1-96-23-12 well. The proposed pipeline will tie into an existing pipeline held by Canyon Gas (COC011902).

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The access road and pipeline will be constructed according to standards in the Gold Book and industry standards for pipeline construction.

## RECREATION

*Affected Environment:* The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The project area has been delineated a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

*Environmental Consequences of the Proposed Action:* The public will lose approximately 35 acres of dispersed recreation potential while the well is in operation. The public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If action coincides with hunting seasons (September through November) it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pad and road, an increase of traffic could be expected increasing the likelihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

*Environmental Consequences of the No Action Alternative:* No loss of dispersed recreation potential and no impact to hunting recreationists.

*Mitigation:* None.

## VISUAL RESOURCES

*Affected Environment:* The proposed action would be located in an area with a VRM III classification. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

*Environmental Consequences of the Proposed Action:* The proposed action would be to upgrade an existing two track road and install a pipeline adjacent to the road. The road would basically follow along the crest of the ridge through sagebrush and pinyon/juniper vegetation. The road ends at the well pad, which would be located farther down the toe of the ridge and in pinyon/juniper vegetation. The route traveled by a casual observer would be RBC 3 which would be approximately 4.9 miles distance from the well pad, and the well pad would not be visible from this road (RBC 3). By painting all production facilities Juniper Green to blend with



and mimic the surrounding vegetation, the level of change to the characteristic landscape would be low, and the standards of the VRM III classification would be retained.

*Environmental Consequences of the No Action Alternative:* There would be no impacts.

*Mitigation:* Paint all production facilities Munsell Soil Color Chart of Standard Environmental Colors *Juniper Green* within 6 months of installation.

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts from oil and gas development were analyzed in the White River Resource Area Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) completed in June 1996. Current development, including the proposed action, has not exceeded the foreseeable development analyzed in the PRMP/FEIS.

#### **REFERENCES CITED:**

Hays, Heidi Guy and Sarah Baer

2005 Class III Cultural Resource Inventory of the XTO Energy Federal Well 1-96-23-12, Rio Blanco County, Colorado. SWCA Environmental Consultants. Broomfield, Colorado.

Tweto, Ogden

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

**PERSONS / AGENCIES CONSULTED:** None

**INTERDISCIPLINARY REVIEW:**

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation, Rangeland Management
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animals
Vern Rholl	Supervisory NRS	Wastes, Hazardous or Solid
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Ed Hollowed	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Nate Dieterich	Hydrologist	Soils
Ed Hollowed	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert J. Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources

# **Finding of No Significant Impact/Decision Record (FONSI/DR)**

## **CO-110-2005-175-EA**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE:** The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

**DECISION/RATIONALE:** It is my decision to approve development of the well, access road and pipeline as described in the proposed action, with the addition of the mitigation measures listed below. This development, with mitigation, is consistent with the decisions in the White River ROD/RMP, and environmental impacts will be minimal.

### **MITIGATION MEASURES:**

1. The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive dust, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. The application of a dust suppressant (e.g. water or “Dust Stop”) will be required during dry periods when dust plumes are visible at speeds less than or equal to 15 mph. Surfacing the roadway with gravels will also help mitigate fugitive dust production.
2. To reduce production of fugitive dust originating from stockpiled soils at the well pad (long term storage), these stockpiles will be covered with biodegradable fabrics such as (but not limited to) jute netting. In addition, stockpiled soils at the well pad will also be seeded with the appropriate seed mixture as outlined in the vegetation section of this document. Furthermore, soils stockpiled for short durations (e.g. during road construction/maintenance) will be wetted to reduce dust production.
3. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
  - whether the materials appear eligible for the National Register of Historic Places
  - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)

- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

4. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

5. Promptly recontour and revegetate all disturbed areas not necessary for production, including road and pad cut/fill slopes with Native Seed mix #3 as listed below. Revegetation will commence immediately after construction and will not be delayed until the following fall. Debris will not be scattered on the pipeline until after seeding operations are completed. Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application.

SPECIES (VARIETY)	LBS. PLS/ACRE
Western wheatgrass (Rosanna)	2
Bluebunch wheatgrass (Secar)	2
Thickspike wheatgrass (Critana)	2
Indian ricegrass (Nezpar)	1
Fourwing saltbush (Wytana)	1
Utah sweetvetch	1

Distribute topsoil evenly over the location and prepare a seedbed by disking or ripping. Drill seed on contour at a depth no greater than 1/2 inch. In areas that cannot be drilled, broadcast at double the seeding rate and harrow seed into the soil. Use seed that is certified and free of noxious weeds. Seed certification tags must be submitted to the Field Office Manager within 30 days of seeding.

6. The operator will be required to monitor the project site(s) for a minimum of three years post disturbance and to eradicate all noxious and invasive species which occur on site using materials and methods approved in advance by the Authorized Officer.

7. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are

expected to begin. The BLM approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineer Technician immediately.

8. It is requested that the permanent combined right-of-way width be minimized to the extent practical from RBC 3 north 16,000 feet (3 miles) by using the access road as part of the pipeline working surface.

9. It is requested that the operator voluntarily agree to conditions whereby employees and any personnel associated with subcontractors refrain from possessing firearms or dogs on the job.

10. Traffic associated with well development, production, and maintenance activities would be limited to speeds of less than 35 miles per hour. Posting and enforcement of these speed limits or the installation of speed deterrents would be the responsibility of the operator.

11. Through the life of the well, subsequent well and pipeline maintenance activities that occur between April 15 and July 15 should strictly avoid the periods of 0.5 hour before sunrise to 2 hours after sunrise, and 1 hour before sunset to sunset. All vehicular access to the well and pipeline, including snowmobile and ATV use, shall remain on designated access roads.

12. In those areas that are composed predominantly of shrubs, woody debris cleared from the road and pipeline corridor should be redistributed uniformly across the pipeline corridor after final recontouring and seeding operations are complete.

13. Due to extent and distribution of habitat modification and anthropogenic features impinging on occupied sage-grouse habitats, development of the access, well, and pipeline (including well completion activities) would not be allowed between April 15 and July 7. This stipulation is consistent with the following RMP stipulation:

**TL-6 (WR-25) Sage Grouse Nesting Habitat.** This area encompasses suitable sage grouse nesting habitat associated with individual leks. This stipulation will not take effect until direct and indirect impacts to suitable nesting cover exceeds 10 percent of the habitat available within 2 miles of identified leks. Further development, after this threshold has been exceeded, will not be allowed from April 15 through July 7. (Development can occur until 10 percent of the habitat associated with a lek is impacted, from then on, additional activity can occur from July 8 through April 14)

**EXCEPTION:** The Area Manager may grant an exception if an environmental analysis and consultation with the CDOW indicates that the proposed action could be conditioned so as not to affect nest attendance, egg/chick survival, or nesting success. An exception could also be granted if the proponent, BLM, and CDOW negotiate compensation that would satisfactorily offset the anticipated losses of nesting habitat or nesting activities. Actions designed to enhance the long term utility or availability of suitable nest habitat may be excepted.

**MODIFICATION:** The Area Manager may modify the size of the TL area if an environmental analysis indicates that the proposed action could be conditioned so as not to affect nest attendance, egg/chick survival, or nesting success. Timeframes may be modified if operations

could be conditioned to allow a minimum of 70 percent of nesting attempts to progress through hatch.

WAIVER: This stipulation may be waived if CDOW determines that the described lands are incapable of serving the long term requirements of sage grouse nesting habitat and that these ranges no longer warrant consideration as components of sage grouse nesting habitat.

14. The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so. Construction activities associated with the proposed actions require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP available for review by the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

15. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies (including springs and seeps) without BLM approval.

16. All road construction/upgrades and well pad construction must strictly adhere to “Gold Book” surface operating standards for oil and gas exploration and development, available in the field office for review. CMPs are not recommended on slopes less than 10% and will NOT be used as drainage relief structures for stream crossings/gullies or to drain inside drain ditches on slopes less than 3% unless approved by the BLM. Based on the nature of the affected soils, drain dips will be utilized in place of CMPs in these locations.

17. All activity must stop when soils or road surfaces become saturated to a depth of three inches. Mud blading will be prohibited in attempts to reduce further soil displacement.

18. In addition, following abandonment of the well pad all disturbed surfaces will be recontoured to the original grade, seeded with the appropriate seed mixture as outlined in the vegetation section of this document and, if necessary, promptly covered with a sufficient amount of woody debris.

19. To mitigate contamination of local ground water, environmentally unfriendly substances (e.g. diesel) must not be allowed to contact soils. The use of impermeable matting under equipment is suggested to intercept such contaminants prior to contacting soils. Furthermore, all pits must be lined and all wastes associated with construction and drilling will be properly treated and disposed of. Finally, aquifers beneficial for human consumption and livestock encountered during the drilling process must be properly sealed to reduce potential for contamination.

20. All road and well pad construction must strictly adhere to “Gold Book” surface operating standards for oil and gas exploration and development. At locations fragile soils are encountered along the access way, an engineered construction/reclamation plan must be submitted and approved by the Area Manager before any construction will be permitted. Native Seed mix #3

will be used in combination with silt fences and geo-textile fabric on fill slopes to enhance stabilization. All activity must stop when soils or road surfaces become saturated to a depth of three inches. No mud blading of roads will be permitted.

21. Stockpiled soils located on slopes greater than 5% will be required to have silt fences positioned on down gradient sides. This action will minimize sedimentation away from of stockpiles.

22. Complete reclamation will follow abandonment of well pads. Access roads and well pads will be recontoured, covered with woody debris, and 100% of disturbed surfaces will be revegetated with Native Seed Mix #3.

23. The use of interim reclamation techniques will be used to the extent practicable on the pad such that: a) all available topsoil material would be used to rehabilitate recontoured cut and fill slopes and areas outside the anchors (maintaining the viability of the soils for final reclamation), b) production facilities are located to maximize the extent of surface disturbance available for recontouring and reclamation after completion operations and through the productive life of the well (e.g., where access road enters pad), and c) all disturbed areas are reseeded and, if necessary, effectively fenced to control livestock use once well completion activities have been finalized (this includes cut and fill slopes of roads and trial application on the roadbeds themselves).

24. In the event newly constructed access roads on BLM surface are no longer needed for well maintenance or development the roads will be recontoured to original grade.

25. All exposed outcrops of the formation must be inventoried by an approved paleontologist with a report submitted to the BLM detailing the results of the inventory and including any recommended mitigation measures before the initiation of construction.

26. A monitor shall be required to be on scene before any excavation into any rock is excavated to build the road, leveling of the well pad or excavation of the reserve/bloolie pit.

27. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO).

Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has

been completed, the operator will then be allowed to resume construction.

28. The access road for well #1 as presently configured is located so that it will destroy the Corral Well pipeline. The access road will have to be relocated so that it is no closer than 25 feet from this waterline so that the functionality of this waterline will be maintained.

29. The Field Manager may direct the operator to water roads or provide for dust abatement at any time he believes

30. The access road and pipeline will be constructed according to standards in the Gold Book and industry standards for pipeline construction.

31. Paint all production facilities (Munsell Soil Color Chart of Standard Environmental Colors) *Juniper Green* within 6 months of installation.

32. Several options may be considered for treatment of slash from this project. A hydro-ax or other mulching type machine could be used to remove the trees. The machines are capable of shredding trees up to 12" in diameter and 15' tall as well as mowing brush like a conventional brush beater. It generally leaves small branches and pieces of wood from pencil size up to bowling ball size. The mulch is evenly scattered across the surface and the tires or tracks distribute the weight of the equipment. This would effectively breakdown the woody fuel and scatter the debris thereby eliminating any hazardous fuel load adjacent to the new road and well pad. The other option would be to cut trees and have them removed for firewood, posts, or other products in accordance with forest management and RMP guidelines. The branches and tops should be lopped and scattered to a depth of 24 inches or less. If the products are left for collection by the general public, they should be piled along the road side or pad to facilitate removal.

**NAME OF PREPARER:** Keith Whitaker

**NAME OF ENVIRONMENTAL COORDINATOR:** Caroline Hollowed

**SIGNATURE OF AUTHORIZED OFFICIAL:**

  
Acting Field Manager

**DATE SIGNED:** 9-21-05

**ATTACHMENTS:** Location map of the Proposed Action.



# Location of Proposed Action CO-110-2005-175-EA

